Investor Activity on GPW Markets in November 2019 (attachment)

Equities Market¹

Main Market	November 2019	November 2018	Change %	January-November 2019	January-November 2018	Change %		
Total								
Value of trading - total (PLN)	15,385,373,154	18,029,402,921	-14.7	181,310,220,304	196,765,404,428	-7.9		
Value of trading - Electronic Order Book (PLN)	15,209,755,251	17,795,816,114	-14.5	177,704,544,993	189,433,429,576	-6.2		
Value of trading - block trades (PLN)	175,617,904	233,586,807	-24.8	3,605,675,311	7,331,974,853	-50.8		
Number of transactions (Electronic Order Book)	1,424,082	1,638,292	-13.1	16,558,106	16,613,531	-0.3		
WIG at the end of the period	57,502.14	58,203.39	-1.2	57,502.14	58,203.39	-1.2		
		Day avarage						
Value of trading - Electronic Order Book (PLN)	800,513,434	889,790,806	-10.0	772,628,456	823,623,607	-6.2		
Value of trading - block trades (PLN)	9,243,048	11,679,340	-20.9	15,676,849	31,878,152	-50.8		
Number of transactions (Electronic Order Book)	74,952	81,915	-8.5	71,992	72,233	-0.3		

NewConnect	November 2019	November 2018	Change %	January-November 2019	January-November 2018	Change %
		Total				
Value of trading - total (PLN)	146,483,151	176,170,011	-16.9	1,402,996,322	1,574,616,591	-10.9
Value of trading - Electronic Order Book (PLN)	143,630,308	173,163,867	-17.1	1,333,911,014	1,497,420,573	-10.9
Value of trading - block trades (PLN)	2,852,843	3,006,144	-5.1	69,085,309	77,196,018	-10.5
Number of transactions (Electronic Order Book)	90,023	73,608	22.3	754,504	712,488	5.9
NCIndex at the end of the period	234.42	202.50	15.8	234.42	202.50	15.8
		Day avarage				
Value of trading - Electronic Order Book (PLN)	7,559,490	8,658,193	-12.7	5,799,613	6,510,524	-10.9
Value of trading - block trades (PLN)	150,150	150,307	-0.1	300,371	335,635	-10.5
Number of transactions (Electronic Order Book)	4,738	3,680	28.8	3,280	3,098	5.9

Derivative Instruments Market

Derivatives	November 2019	November 2018	Change %	January-November 2019	January-November 2018	Change %
		Total				
Volume - EOB and block trades (#)	456,560	664,252	-31.3	6,334,895	7,323,170	-13.5
Index futures	227,859	343,946	-33.8	3,546,508	4,057,812	-12.6
Single-stock futures	149,172	124,559	19.8	1,311,749	1,185,852	10.6
Currency futures	63,101	162,760	-61.2	1,250,669	1,805,789	-30.7
Interest rate futures	0	8	-100.0	10	46	-78.3
Options	16,428	32,979	-50.2	225,959	273,671	-17.4
		Day avarage				
	Volume	EOB and block trades	(#)			
Index futures	11,993	17,197	-30.3	15,420	17,643	-12.6
Single-stock futures	7,851	6,228	26.1	5,703	5,156	10.6
Currency futures	3,321	8,138	-59.2	5,438	7,851	-30.7
Interest rate futures	0	0		0	0	
Options	865	1,649	-47.5	982	1,190	-17.5
		NOI ²				
Index futures	60,518	53,644	12.8	60,518	53,644	12.8
Single-stock futures	41,427	25,541	62.2	41,427	25,541	62.2
Currency futures	95,552	80,567	18.6	95,552	80,567	18.6
Interest rate futures	4	13	-69.2	4	13	-69.2
Options	21,100	24,124	-12.5	21,100	24,124	-12.5

Debt Instruments Market

Catalyst ³	November 2019	November 2018	Change %	January-November 2019	January-November 2018	Change %
Value of listed issues (PLN bn) ⁴	91.3	86.5	5.5	91.3	86.5	5.5
Value of trading - total (PLN)	171,212,548	173,651,263	-1.4	2,712,249,625	2,423,604,824	11.9
Value of trading - Electronic Order Book (PLN)	164,190,184	170,136,293	-3.5	2,548,289,247	2,032,805,615	25.4
Value of trading - block trades (PLN)	7,022,364	3,514,970	99.8	163,960,378	390,799,209	-58.0
Number of transactions (Electronic Order Book)	5,942	8,153	-27.1	74,559	81,647	-8.7

Treasury BondSpot Poland ^S	November 2019	November 2018	Change %	January-November 2019	January-November 2018	Change %
Value of trading - cash transactions (PLN)	5,003,262,675	16,577,826,475	-69.8	84,116,643,675	137,318,362,000	-38.7
Value of trading - conditional transactions (PLN)	9,501,806,030	23,356,479,954	-59.3	184,489,011,123	249,662,033,055	-26.1

Structured Instruments, ETFs and Investment Certificates Markets January-November 2019 Structured products and ETFs November 2019 November 2018 Change % January-Nov 2018 Change % lue - EOB and block trades (PLN) 133,875,278 95,361,027 40.4 1,193,524,93 787,687,56 -4.8 51,391,92 68,287,85 Varrants 19,959,818 16,726,666 154,264,837 140,594,648 19.3

51.

Commodity Market

Electricity - TGE	November 2019	November 2018	Change %	January-November 2019	January-November 2018	Change %
Volume of trading - spot transactions (MWh)	2,833,801	2,518,613	12.5	30,696,457	25,006,573	22.8
Volume of trading - forward transactions (MWh)	19,508,683	20,047,150	-2.7	182,867,702	185,602,616	-1.5

Property rights - TGE	November 2019	November 2018	Change %	January-November 2019	January-November 2018	Change %
Volume of trading - spot transactions (MWh) ⁶	1,609,540	2,846,387	-43.5	41,174,043	55,619,626	-26.0
Volume of trading - spot transactions (toe) ⁷	20,548	16,271	26.3	465,670	299,487	55.5

Gas - TGE	November 2019	November 2018	Change %	January-November 2019	January-November 2018	Change %
Volume of trading - spot transactions (MWh)	2,590,071	2,734,683	-5.3	19,730,323	21,118,039	-6.6
Volume of trading - forward transactions (MWh)	8,813,033	10,663,505	-17.4	111,569,602	110,688,320	0.8

¹ transactions in shares, allotment certificates and subscription rights

² number of open interest, data at the end of the period

³ corporate, municipal and mortgage bonds ⁴ corporate, municipal and mortgage bonds. As of 3rd of January 2018 BGK bonds are treated as Treasury bonds and hence the value of corporate bonds shown is lower

and cannot be compared with previous tables. January 2017 has been recalculated according to MIFID2 $^{\rm 5}$ transactions in Treasury bonds and bills

⁶ transactions in all TGE traded property rights excluding rights to certificates connected with energy efficiency ('white certificates')

As of December 29, 2017, trading in futures contracts for property rights for electricity generated in RES was suspended. The necessity to end trading in these contracts on TGE is related to the adaptation of TGE's activities to the MIFiD2 regime.

 $^{7}\,\mathrm{transactions}$ in property rights to certificates connected with energy efficiency ('white certificates')